THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte PAUL S. FURMANEK, DAVID A. GLASSCOCK, MICHAEL KEANE JR., BARRY A. MAHLER and V.N. MALLIKARJUANA

Appeal No. 1995-4855
Application No. 08/146,334[1]

ON BRIEF

Before KIMLIN, JOHN D. SMITH, and WALTZ, Administrative Patent Judges.

WALTZ, Administrative Patent Judge.

ON REQUEST FOR REHEARING

Pursuant to the provisions of 37 CFR § 1.197(b)(amended Dec. 1, 1997), appellants have submitted a request for rehearing (hereafter "Request") of our decision dated Aug. 18,

[1] Application for patent filed November 1, 1993.

1998 (hereafter “Decision”), affirming the rejection of claims 1 through 8 and 11 under 35 U.S.C. § 103 as unpatentable over Leicester in view of Union Carbide and Belf.[2]

Appellants request rehearing based on four points. Appellants’ first point is that the Board misapprehended the teaching of U.S. Patent No. 3,632,834 (Christoph) as it relates to temperature and ash content (Request, page 1). Specifically, appellants argue that the production of two-carbon compounds containing no hydrogen, as in Christoph, is significantly different from the production of a single carbon compound containing hydrogen as recited in the claims on appeal, and one of ordinary skill in the art would readily recognize that the temperature range disclosed by Christoph would not necessarily be suitable for the claimed process (Request, page 2). Appellants also argue that the Decision erroneously equates alkali metal content with ash content and submits U.S. Patent No. 5,136,113 (Rao) as evidence that the

[2]Appellants have also submitted a "Supplement to Request for Rehearing Under 37 C.F.R. 1.197(b)", dated Feb. 16, 1999, Paper No. 21, which updates the status of S.N. 08/458,604 as noted in the "Related Appeal" section of the Request. It is now noted that S.N. 08/458,604 has issued as U.S. Patent 5,955,637 on Sept. 21, 1999.

mere water washing of Christoph would still leave "relatively high amounts of other ash components" (Request, page 3).

Appellants' arguments are not well taken since Christoph is directed to the same type of reaction as the primary reference (Leicester), namely the exchange of a chloro atom from a chlorinated hydrocarbon for the fluorine from the HF reactant in the presence of a chromium trifluoride catalyst (see Christoph, column 1, lines 33-36; column 2, lines 24-35; Leicester, page 1, left column, lines 1-46).[3] Furthermore, the teaching of Christoph regarding the process temperature is only used as an additional teaching to Leicester with regard to the temperature limitation recited in claim 11 on appeal (Decision, page 9).

Appellants' arguments regarding the ash content are equally unpersuasive. Certainly the reduction in alkali metal content as taught by Christoph is also a reduction in the ash content. The only evidence appellants submit regarding the ash content is the Rao reference. However, the data in Table

[3]Christoph is cited and discussed by appellants on page 3 of the specification. See footnote 4 on page 6 of the Decision.

1 of Rao does *not* support appellants' argument that the water washing of Christoph results in low amounts of alkali metal content but leaves high amounts of other ash components (Request, page 3). Rao discloses, as set forth in the Examples in column 5 and Table 1 in columns 5-6, that the ash content of water-washed carbon supports is 0.55%, which is very similar to the limitation of claim 1 on appeal of "an ash content less than 0.5 weight percent".[4] As previously discussed, Leicester teaches a water wash of the carbon support "advantageously acidified by addition of hydrochloric acid" (page 1, right column, lines 7-9). Accordingly, if a water wash would have been expected to lower the ash content of carbon supports to such low values, as taught by Rao, the additional advantageous acid treatment taught by Leicester would reasonably have been expected to produce ash contents within the claimed range.

Appellants' second point is that the process of preparing the carbon support as taught by Leicester would not be

[4]Of course, this final ash content would vary based on the initial ash content of the carbon (see the specification, page 12, lines 16-28).

expected to remove significant ash content (Request, page 4). Appellants submit that even if some ash component was dissolved in the soaking phase, redeposit would occur during the drying phase (*Id.*).

Appellants' argument is not persuasive since the allegation that redeposit would occur during the drying phase is mere attorney argument and is not supported by any objective evidence. *In re Geisler,* 116 F.3d 1465, 1469, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997). In fact, the water washing of carbon supports reduces the ash content significantly as shown by Christoph and Rao. It should also be noted that the method of preparation of the low ash carbon supports is not a limitation of the claims on appeal.

Appellants' third point is that the Board misapprehended the teaching of Leicester relating to reaction temperature (Request, page 5). Specifically, appellants argue that the teaching in Leicester of a minimum temperature of 350EC. for reacting carbon tetrachloride would not have suggested the temperature range recited in claim 11 on appeal (*Id.*). However, as noted on page 9 of the Decision, Leicester clearly

teaches that "[t]he choice of suitable temperature is also influenced by the particular derivative it is desired to prepare since the formation of those derivatives containing a lower number of fluorine atoms is favored by a lower temperature." (Page 2, left column, lines 52-57). Leicester also teaches that the reaction time and ratio of reactants are important considerations in determining the reaction temperature (Page 2, left column, lines 58-right column, line 24). Optimization of such a result-effective variable is normally well within the ordinary skill in the art. *In re Boesch,* 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). Accordingly, appellants' arguments are not persuasive.

Appellants' fourth point is that the Board overlooked the unique nature of recycling HF-containing azeotropes (request, page 5). Appellants submit that there is no suggestion in any of the cited publications that azeotropes rather than some other combination of components should be recycled (*Id.* at page 6).

As reiterated on page 11 of the Decision, it is well recognized that recycle of intermediates and unreacted

starting materials is “an obvious expedient”. See Christoph, column 4, lines 49-52, where it is taught that “recycle of unreacted or incompletely converted materials, while desirable commercially, is not necessary”. Belf teaches recycle of incompletely converted materials mixed with fresh reactants (column 2, lines 29-31). Leicester likewise teaches the separation and return of unreacted starting materials or incompletely converted reactants into the stream of original reactants (page 1, right column, line 58-page 2, left column, line 10). Although Leicester and Belf teach removal of unreacted HF by a wash (Leicester, page 2, right column, lines 25-44; Belf, column 2, lines 67-68), it would have been reasonably expected, based on the teachings of the prior art, to recycle the unreacted material and incompletely converted material with HF so as to form a new feed.

We do not find in the request any argument convincing us of error in the conclusions we reached in our Decision. Accordingly, appellants’ Request for Rehearing is denied.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

Appeal No. 1995-4855
Application No. 08/146,334

DENIED

EDWARD C. KIMLIN Administrative Patent Judge	)	
JOHN D. SMITH Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
THOMAS A. WALTZ Administrative Patent Judge	)	

lp

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Appeal No. 95-4855
Application No. 08/146,334

APJ WALTZ

APJ SMITH JOHN D.

APJ KIMLIN

DECISION: DENIED
Send Reference(s): Yes No
or Translation (s)
Panel Change: Yes No
Index Sheet-2901 Rejection(s): _____

Prepared: September 17, 2001

Draft Final

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OB/HD GAU

PALM / ACTS 2 / BOOK
DISK (FOIA) / REPORT